

Structure of the Matrix Protein of Marburg Virus

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The Marburg (and Ebola) virus is a member of the filovirus family. Relatively little is known about these emerging pathogens. There appear to be only seven proteins encoded by these negative-sense single-stranded RNA viruses, one of which is the matrix protein vp40 that makes up some 30% of the mass of the viral particle. In an effort to understand the structure and function of vp40, we have overexpressed and crystallized it. Vp40 crystals diffract x-rays to 2.5 Å resolution and native and mercury derivative datasets have been measured with synchrotron radiation. Together with data from a rotating anode source, we have determined the structure of vp40 and are in the process of refinement and interpretation.